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PROGRAMS AND SERVICES FOR MUNICIPAL GOVERNMENTS 1987 - 88

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ALBERTA ENVIRONMENT - PROGRAMS AND SERVICES
FOR MUNICIPAL GOVERNMENTS

1987-88

Alberta Environment

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FOR MUNICIPAL GOVERNMENTS

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A. APPROVALS, PERMITS AND LICENSES

- 1) Clean Water Permits to Construct and Licenses to Operate for Municipal Plants
- 2) Development and Reclamation Approvals
- 3) Pesticide Application Permits and Applicator and Vendor Licenses
- 4) Beverage Container Licenses
- 5) Surface Water Permits & Licenses
- 6) Groundwater Permits & Licenses
- 7) Water and Wastewater Operator Certification Program

1) Clean Water Permits to Construct and Licenses to Operate Municipal Water and Sewage Treatment Plants

Service Beneficiary: Public/Municipalities

Objective/Purpose: To ensure Albertans have safe drinking water and to protect the quality of the province's surface and groundwater and land resources from municipal wastewater pollution.

Description of Service:

The Director of Standards and Approvals, under the Clean Water Act, the Clean Water (general) Regulations and the Clean Water (Municipal Plants) Regulations has responsibility for reviewing and issuing approvals for the construction and operation of the following municipal facilities:

- i) storm water systems;
- ii) sewerage projects including sewer systems and wastewater treatment facilities (private septic tank systems are excluded); and
- iii) waterworks systems including water supply systems, water treatment facilities and water distribution systems (single family dwelling systems are excluded).

The formal approvals issued by the Director of Standards and Approvals for municipal projects include:

- i) Permits to Construct;
- ii) Certificates of Compliance;
- iii) Licenses to Operate; and
- iv) Letters of Permission

These formal approvals are issued based on technical reviews of project reports, plans, specifications and other associated submissions. Submissions are reviewed in relation to: Clean Water Legislation; standards/guidelines/criteria that have been developed by the Department; and accepted municipal engineering design concepts and practices. Department staff through correspondence and meetings work with the public and municipalities to plan and implement municipal water supply and sewerage systems. This public function, combined with in-house project reviews, is extremely important in maintaining and protecting public health in Alberta.

2) Development and Reclamation Approvals

Service Beneficiary: Public, Industry, Municipalities

Objective/Purpose: To protect the environment by minimizing surface disturbance and ensuring disturbed land is returned to equivalent land capabilities upon the conclusion of land reclamation.

Description of Service:

Prior to commencing a regulated operation, an operator must submit an application for Development and Reclamation Approval. This application outlines the operator's plans to anticipate problems, minimize the extent and effects of disturbance, and to ensure successful reclamation. The plans are reviewed by government for compliance with land resource legislation and policies.

The Development and Reclamation Approval specifies operating terms and conditions for development and reclamation activities.

Types of projects designated by law as regulated operations include the larger:

- Coal Mines
- Oil Sands Mines
- Insitu Oil Sands Recovery Schemes

Oil and Gas pipelines
Sand, Gravel, Clay and Marl Pits

3) Pesticide Application Permits and Applicator and Vendor Licenses

Service Beneficiary: Public, Industry, and Municipal Governments

Objective/Purpose: To facilitate the enhancement of society and protection of man, animals, and the environment through the safe and efficient management of pesticide chemicals.

Description of Service:

Licenses are required:

- i) to operate a business or provide a service involving the sale, use or application of a pesticide; and
- ii) to apply or sell pesticides for hire or reward, or to offer to apply or sell pesticides.

Twelve (12) separate classes of commercial applicator licences are issued, depending upon the particular type of pest control that is offered. The applicator is licenced, provided he/she has met the qualifications and requirements of training, experience, insurance and medical examination set by the legislation. The applicator is required to maintain records for each pesticide application and to submit record summaries each year.

Two classes of wholesale pesticide vendor licences are issued, as well as three classes of retail pesticide vendor licences. The holder of a retail vendor licence is required to ensure that at least one competent individual is at each premise or outlet covered by the licence and to comply with legislative requirements for storage, display and record-keeping.

Permits are required:

- i) for the application of pesticides to or within 30 horizontal metres of open bodies of water;
- ii) for the application of pesticides in the Green Zone of the province for the control of vegetation along the rights-of-way;
- iii) for the use of such restricted products as hydrocyanic acid gas, methyl bromide, phosphine or strychnine over 2%; and
- iv) for research and testing of un-registered pesticides or un-registered uses of pesticides.
- v) for the application of pesticides for forest production

All permits issued by the department ensure compliance with either federal registration of product use or federal research permits which are submitted for the application for a permit.

4) Beverage Container Licenses

Service Beneficiary: Public

Objective/Purpose: Sets up a system for the orderly collection and recycling of beverage containers.

Description of Service:

The Department:

- licenses beverage container return depots;
- sets deposit levels on refillable and non-refillable containers;
- sets handling charges for depots;

- mediates disputes between depots, manufacturers and the public;
- enforces the Beverage Container Act; and
- aids the manufacturer with advice on recycling material collected.

The Department is not involved with mobile collection services. About 200 licensed depot operators are registered in the Province at the present time.

5) Surface Water Permits and Licenses

Service Beneficiary: Public, Municipalities, Industry

Objective/Purpose: The allocation of water in an orderly way and for beneficial purposes. At the same time, the source of supply, individual rights, and the environment must be protected.

Description of Service:

Licenses are required:

- to divert and use water for a number of purposes, including domestic, municipal, irrigation, agricultural and industrial;
- to dam, impound or store water for such things as stock water, flood control, flow regulation and erosion control; and
- to divert water, without impounding, for drainage or flood control.

This licence would stipulate the location, source of supply and quantity and rate of withdrawal.

Permits are required:

- to place any structure or material (e.g. pipelines and bridges), which may affect water management, in, over or next to water; and

- to alter the shoreline, banks or bed of a body of water in a way which may affect water management, including sand and gravel removal, erosion protection and brushing operations, docks and wharfs.

This permit would stipulate the location and terms and conditions related to construction procedures and timing.

Approval is NOT necessary for:

- domestic farm use and irrigation of up to one acre of garden; and
- construction of a small dugout for domestic stock water.

6) Groundwater Permits and Licenses

Service Beneficiary: Public, Municipalities, Industry

Objective/Purpose: To allocate water for beneficial purposes while at the same time protect the source of supply, individual rights and the environment.

Description of Service:

Licenses are required to divert and use ground water on a permanent basis for a number of purposes, including:

- Municipal - hamlets, villages, towns, cities, countries
- Agricultural - feedlots
- Industrial - processing and cooling water
- Irrigation - including greenhouses and tree farms

This license would stipulate the location, source of supply, and quantity and rate of withdrawal.

Temporary Permits are required to divert and use ground water on a temporary basis for any of the above listed purposes, but are most often issued for:

- construction camps
- pilot plants
- dewatering construction sites and mines
- water flood

This temporary permit would stipulate the location, source of supply, quantity and rate of withdrawal and expiry date.

Approval is NOT necessary for:

- domestic farm use and irrigation of up to one acre of property;
- household use on property owned or occupied by the well owner, such as on acreages;
- wells equipped with hand pumps; and
- small quantities of water used for human consumption in small industrial buildings.

7) Water and Wastewater Operator Certification Program

Service Beneficiary: Public, Municipalities

Objective/Purpose: To protect public health and safety and to protect the environment by ensuring that all municipalities have properly qualified personnel to operate the water and wastewater facilities.

Description of Service:

All municipalities are required to have operators certified as being qualified to operate the municipality's water and wastewater facilities.

This is carried out by reviewing the facility as to its size and complexity to determine what type of operator is required, reviewing operator qualifications and and providing certification exams.

Operators' certificates are renewed biannually.

B. MONITORING CONTROL AND ENFORCEMENT

- 1) Land Reclamation
- 2) Sand and Gravel Program
- 3) Provincial Groundwater Observation Well Network
- 4) Litter Control
- 5) Pesticide Management
- 6) Municipal Water & Sewerage Systems

1) Land Reclamation

Service Beneficiary: Public, Municipalities, Industry

Objective/Purpose: The LCRC (Land Conservation and Reclamation Council) has the responsibility under the Land Surface Conservation and Reclamation Act to ensure that the construction operation and abandonment of surface disturbing operations are performed in such a manner as to return the land to the same productive capability as was prior to disturbance.

Description of Service:

Before an operator can abandon an operation or surrender the surface lease, he must apply for and receive a Reclamation Certificate. The issuance of a Reclamation Certificate requires an inspection of the site by the Reclamation Officers along with the land owner and the company. Any indication of a problem with the land may require the Reclamation Officers to issue a Reclamation Order which would include topsoiling, manuring, cultivation, or rock picking, etc. If the Reclamation Officer finds that proper reclamation has been reached, he will then issue a Reclamation Certificate.

Types of projects that require monitoring and certification:

- Wellsites and access roads
- Pipelines
- Batteries
- Transmission Lines
- Quarries
- Coal and Oil Sands Mines
- Sand, Gravel, Clay and Marl Pits
- Waste Disposal Sites
- Land Fill Sites
- Coal and Oil Sands Exploration
- Insitu Oil Sands Recovery Schemes

2) Sand and Gravel Program

Service Beneficiary: Public, Municipalities, Industry

Objective/Purpose: To ensure that Sand and Gravel pits on patented land will be reclaimed to a useful state.

Description of Service:

The program has documented 1,746 pits in 39 municipalities and operators are being notified one municipality at a time of the reclamation and approval requirements.

Pits disturbing over five acres require a Development and Reclamation Approval prior to operation. Approximately 35% of the 1,746 pits documented are in this category. The Sand Gravel Clay and Marl Regulations AR 228/82 applies to private, municipal and provincial operations on patented land. A security deposit of \$250.00 per acre is required for private operations but no security is required for municipal or provincial operations.

To date the gravel operators in 39 municipalities have been notified of the requirements and another seven municipalities will be notified in the coming year. The municipalities identified as having increased industrial use for aggregate will be given priority for notification.

Of the 589 pit operators contacted to date, 96% have responded positively to requests for Development and Reclamation plans, which indicates a high level of acceptance of the program. The Municipalities and the Provincial Government, as pit operators, play a lead role in adhering to development and reclamation guidelines.

3) Provincial Groundwater Observation Well Network

Service Beneficiary: Public, Industry, Government
Authorities located across
Provincial and Country
boundaries.

Objective/Purpose: To monitor water levels and
groundwater quality. This
becomes a source of background
data, which can be used to
determine trends for the future
development of this resource.
The data obtained is used to
assist in the orderly
utilization and protection of
our groundwater resources.

Description of Service:

The service is provided through The Provincial
Observation Well Network.

Provincial Observation Well Network

This is a network of over 180 wells located throughout
the province. Fifty of these wells can be classified
as "local" because they are located near areas of
known influences on groundwater, for example, rivers,
pumping wells and dams. Monitoring of these wells
(continuous water level recordings and periodic water
sampling) provides data to determine the influence
exerted on the groundwater resource. The remainder of
the wells monitored (approximately 130) are used to
determine background data on water levels and water
quality for most major aquifers.

This service of monitoring was continued after the
networks was absorbed, in mid 1982, from the Alberta
Research Council. It is an ongoing program expected
to maintain most of the present wells and expand into
new areas throughout Alberta. Data is available.

4) Litter Control

Service Beneficiary: Public, Municipalities

Objective/Purpose: To provide municipalities with a mechanism to help control litter and litter related properties - i.e. unsightly premises, etc.

Description of Service:

The Act provides mechanism to:

- charge people with offenses if they are caught littering and allow for clean up by the Crown;
- require clean up of unsightly premises, including clean up by the Crown with cost recovery if necessary; and
- requires for clean up of spills on highways or roadways with clean up by the Crown with cost recovery if necessary.

The Department is also involved with other litter programs through funding Outdoors Unlittered. Clean up orders for 1985/86 fiscal year amounted to 300. They were issued by municipalities.

5) Pesticide Management

Service Beneficiary: Public, Industry, and Municipal Governments

Objective/Purpose: To provide and promote a high standard of Pesticide Management practice and awareness.

Description of Service:

Control:

In Alberta, pesticide chemicals are controlled under the Agricultural Chemicals Act & Regulations, and it is the policy of the department to develop and administer legislation which will encompass four broad aspects of pesticide management:

- i) control of use, application, handling, and monitoring;
- ii) assignment and sharing of responsibilities with other jurisdictions;
- iii) provision for the incorporation of advice on the management of pesticides; and
- iv) provision for the undertaking of such management responsibilities as the classification or scheduling of pesticide chemicals.

The Agricultural Chemicals Act is designed to develop a high standard of management practice and awareness by those person(s), organizations and agencies affected by the legislation.

The Pesticides Chemicals Branch, within the department, is given the responsibility for administering the act, its provisions and regulations, and the general management functions which flow from the legislation. Additionally, under the act, local authorities are required to appoint inspectors to carry out the provisions of the legislation within the boundaries of their municipalities.

Control measures to ensure the safe, informed, effective application of pesticide chemicals include:

- i) permits;
- ii) licences;
- iii) examinations;
- iv) scheduling of pesticides to various classes, depending upon potential for human health hazard and/or environmental hazard; and
- v) monitoring and inspections.

Monitoring and Inspections:

Inspections are carried out to assess compliance with licence requirements for pesticide applicators and vendor outlets, as well as for compliance with registered uses of pesticides; and other inspections (pre- and post-treatment) are conducted annually to ensure adherence to permit conditions.

Monitoring programs which are carried out on an on-going basis, include:

- i) residue sampling of foods, feeds and potable water;
- ii) environmentally-sensitive areas such as water bodies and forested areas; and
- iii) use patterns of selected pesticides to determine the potential risk to human health and the environment.

Special Projects: The branch administers the following special programs:

- i) The Biting Fly Control Financial Assistance Program
- ii) The Pesticide Container Collection Program

Enforcement: The Agricultural Chemicals Act provides for:

- i) A written suspension order - by any inspector under the act who is of the opinion that the use, handling, storage, display, disposal or transport of an agricultural chemical is dangerous to the health of any person or animal.
- ii) A chemical control order - by the Director of Pollution Division outlining specific corrective action to be taken within stated time constraints.
- iii) Prosecution - a person who contravenes the Agricultural Chemicals Act or the regulations is guilty of an offense and is liable to a fine of not more than \$1000 or to imprisonment for 90 days without the option of a fine, or to both fine and imprisonment.
- iv) suspension or cancellation of a permit or licence - when the Minister (or his delegate) is satisfied that the holder has contravened the Agricultural Chemicals Act or the regulations.

6) Municipal Water and Sewerage Systems

Service Beneficiary: Public, Municipal Governments,
Industry

Objective/Purpose: To ensure Albertans have safe drinking water and to protect the province's water from municipal discharges.

Description of Service:

The Director of Pollution Control is responsible to see that all municipal water and sewage facilities are properly operated and maintained in accordance with the Clean Water Act. A municipal system is any communal system involving more than one household.

This service is carried out by means of regular inspections, sampling of the facilities and review of the self-monitoring data that the municipalities are required to produce and submit to the department.

The quality of individual municipality's drinking water is maintained on a number of data bases. The chemical parameters include inorganic salt, heavy metals, and a wide variety of organic compounds.

C. INFORMATION AND ADVISORY SERVICES

- 1) Water Resources Inspection Services
- 2) Groundwater Resources Information Services
- 3) Wastewater Irrigation and Sludge Spreading
- 4) Regional and Modified Landfill Investigations
- 5) Pest Management, Diagnostic and Extension Services
- 6) Pollution Emergency Response Team (PERT)
- 7) Waste Manifest System
- 8) Pesticide Management
- 9) Water and Wastewater Operator Training Program
- 10) Municipal Water and Sewage Systems
- 11) Research Coordination and Advisory Services
- 12) Flood Risk Mapping
- 13) River Forecast Centre
- 14) River Ice Problem Mitigation

1) Water Resources Inspection Services

Service Beneficiary: Public, Municipalities

Objective/Purpose: To provide technical and engineering advice to individuals and municipalities on problems caused by surface water.

Description of Service:

Requests for inspections are made to the Regional Office of the Water Resources Administration Division. Field investigations are conducted by department staff and technical reports are prepared. All individuals involved in an inspection are advised in writing of the proposed action and recommendations required to resolve the surface water problem.

Technical and engineering advice is provided on a first come first serve basis.

This is an ongoing program that has been in place for many years.

2) Groundwater Resources Information Services

Service Beneficiary: Public, Industry, Government Authorities.

Objective/Purpose: To maintain and develop a systematic source of groundwater data in the Province, with ready access in order to supply the information to the general public, industry and consultants in a format compatible with their needs.

Description of Service:

A general groundwater data file, made up of over 270,000 files and growing at a rate of about 12,000 files per year, is maintained. It contains driller reports submitted as a requirement under the Ground Water Development Act, water chemistry reports from the Division Laboratory in Lethbridge and the Environmental Centre Laboratory in Vegreville, geophysical logs, pumping test data and other relevant well information. An index of basic data for individual wells is computerized.

The general file is supported by a groundwater reports file with over 3,000 titles received from consultants and government agencies. Each report is indexed in a bibliography.

Both files are microfilmed and regularly updated.

Responses to public information requests are immediately given over the phone when possible, or by providing paper or microfiche copies of the pertinent documents. Availability of the services is actively promoted.

3) Wastewater Irrigation and Sludge Spreading

Service Beneficiary: Public, Industry and Municipal Governments

- Objective/Purpose: 1. To make recommendations regarding suitability of land to receive municipal wastewater irrigation.
2. To assess the suitability of land treatment of industrial wastes over the long-term and at field scale.
3. To investigate crop yields and changes in chemical character of soils and plants as the result of land spreading of sewage sludge.

Description of Service:

1. Municipal Wastewater Irrigation

Samples of effluent from sewage lagoon are analyzed to determine if the quality is suitable for irrigation. If so, the soils to be used are tested to determine physical and chemical characteristics. In some cases data from consultants' reports are reviewed.

2. Evaluation of Industrial Wastewater Schemes

Numerous industrial wastewaters with high organic and nutrient concentrations are difficult to treat by irrigating at the same rates as for municipal wastewater. However, treatment of such wastewaters from some industries appears feasible. To determine this, soils and groundwater quality of irrigation schemes associated with potato, meat, sour gas processing plants and nitrogen fertilizer manufacturers, are monitored.

3. Land Spreading of Sewage Sludge

Many communities in Alberta find their sewage sludge storage lagoons rapidly fill to capacity. An alternative to building new lagoons is land spreading. Sludge adds nitrogen and phosphorus, as well as heavy metals, to the soil. There is concern that the heavy metals will enter the food chain through crops grown on the sludge-treated soil.

Experimental plots have been established near Edmonton, Calgary and Red Deer. Soil and plant samples have been analyzed over a number of years to determine differences in chemical composition as a function of either rate of application or of time.

Under the Clean Water Act & Regulations, a letter of permission must be obtained from the Director of Standards and Approvals, prior to the application of wastewater or sludge on land.

4) Regional and Modified Landfill Investigations

Service Beneficiary: Public, Municipal Governments

Objective/Purpose: To ensure that landfills are developed at sites where the risk of groundwater contamination from the landfill is minimal.

Description of Service:

1. Regional Landfill Evaluations

- a) Municipalities are assisted in the selection of potentially suitable sites for landfill development by defining general areas through the use of published and unpublished data. That is, constraint maps are constructed for those parts of the area ranging radially from 8 to 24 kilometers from the particular municipality, showing suitable and unsuitable areas for landfilling.
- b) Requests for hydrogeological investigations are received for specific sites. The municipality is encouraged to submit several sites at once in order that some initial ranking can be done.
- c) Office evaluations are carried out using aerial photographs, and published and unpublished information, to rank the sites.
- d) A detailed hydrogeological investigation of the best available site is done to identify the following parameters:
 - (i) topography and landforms;
 - (ii) type of surficial and bedrock materials and hydraulic conductivities;
 - (iii) shallow aquifers;
 - (iv) depth to water table; and
 - (v) direction of groundwater flow.

2. Modified Landfill Evaluations

- a) Again, assistance is provided by defining general suitable areas for landfills (smaller areas than for regional).
- b) Requests for investigations are received from the local health unit.
- c) Investigations are designed to identify topography and landforms; type of surficial and bedrock materials; shallow aquifers; and depth to water table.

5) Pest Management, Diagnostic and Extension Services

Service Beneficiary: Agricultural Producers,
Municipalities, Provincial
Government and the Public

Objective/Purpose: To provide insect, plant
disease, weed and chemical
damage, diagnostic and extension
services.

Description of Service:

1. Diagnostic Services

Several thousand samples are diagnosed annually for district agriculturists, agricultural fieldmen, Health Units, Alberta Agriculture Regional Crops Laboratories, farmers, horticulturists and home gardeners. In most cases control recommendations are provided or advice is given on how to prevent or reduce damage in future crops.

- a) Insects - Over 600 insect submissions of agricultural, horticulture and public health significance are identified annually.
- b) Plant Diseases - About 1200 plants are received annually for disease identification. To determine the incidence of important diseases, surveys are conducted in grain, oilseed and forage crops in northeastern Alberta.

- c) Weeds - About 500 weed diagnoses are made annually and advice is given on control methods. A weed garden is maintained for training of field staff and for other extension purposes.
- d) Chemical Damage - Plants suspected of having been damaged by herbicide drift or by exposure to other chemicals are diagnosed. About 500 cases are handled each year. Correct diagnosis of damage caused by herbicides and other chemicals to field crops and other vegetation is necessary not only to determine cause of the damage but also to be able to assess economic losses, help settle legal claims and to provide information on how to prevent such occurrences.

2. Extension Services

Pest control information is provided through courses, seminars, talks, agricultural fairs, a Crops Field Day and contact with the farm news media. Publications such as "Weeds of Alberta", "Herbicide Action & Injury", "Herbicide Carry-Over", "Biological Pest Management" and numerous brochures/pamphlets/information sheets are made up to be used in extension activities.

6) Pollution Emergency Response Team (PERT)

Service Beneficiary: Public, Industry, and Municipal Governments

Objective/Purpose: To provide successful mitigation of material spills and, after hours, to respond to calls from the public, industry and Municipal Governments pertaining to environmental matters - air and water pollutions, contraventions, complaints, etc.

Description of Service:

1. Service provided by the five branches of Pollution Control Division, each branch supplies one member.
 - a) After receipt of information of a spill, review the situation; provide on-site supervision of containment, clean-up, disposition of cleaned-up materials and restoration of spill site; advise on mitigation of spills.
 - b) Assure notification of other concerned agencies such as Forestry, Wildlife, Municipalities, Police, A.P.S.S.
 - c) Investigate complaints and mitigate the problems.
 - d) Monitor incidents to ensure minimal effect on the environment.
 - e) Conduct follow-up inspections to ensure all problems have been addressed and corrected.
 - f) Initiate and conduct enforcement proceedings as required in those cases where the problems are not being corrected.

On an average, over 800 telephone calls per year are responded to as part of the after hours emergency service.

7) Waste Manifest System

Service Beneficiary: Municipalities, Industries

Objective/Purpose: The Waste Manifest is a tracking system for hazardous wastes.

Description of Service:

It provides the generator of hazardous wastes with information about where his material is being shipped to.

It provides haulers and disposers with information as to exactly what kind of material they are hauling or disposing of.

The manifest is a six part form:

Copy #1 - completed by the generator, then it is mailed to Environment

Copy #2 - retained by the generator

Copy #3 - completed by the receiver, then it is mailed to Environment

Copy #4 - retained by the receiver

Copy #5 - retained by carrier

Copy #6 - mailed to generator by the receiver

Several thousand manifests are processed each year. Manifests have been implemented on a voluntary basis.

8) Pesticide Management

Service Beneficiary: Public, Industry, and Municipal Government

Objective/Purpose: To facilitate the enhancement of society and protection of man, animals, and the environment through the safe and efficient management of pesticide chemicals.

Description of Service:

Training:

Training courses have been developed to provide instruction in the safe and effective application and handling of pesticide chemicals; courses are provided for 10 separate classifications of pesticide applicator, as well as to pesticide dispensers in retail outlets.

Extension:

As a proactive measure of control, extension has provided significant gains in pesticide management. Activities include:

- i) distribution of a monthly "update" newsletter to over 1700 recipients;
- ii) publication of a semi-annual "Pesticides in Focus" report, as well as several other technical reports each year;
- iii) presentation of seminars to a variety of pesticide-user groups, industry, schools, pesticide inspectors, etc;
- iv) publication of a "Pesticide Poison Manual" for medical and hospital emergency-treatment staff;
- v) publication of a "Pesticide Spills and Fires" manual for emergency-response agencies; and
- vi) provision of technical assistance to several hundred public, industrial, government and news media pesticide-related queries annually.

9) Water and Wastewater Operator Training Program

Service Beneficiary: Operators of municipal water and wastewater systems

Objective/Purpose: To ensure that municipal drinking waters are safe and potable and that the environment is protected from municipal discharges by proper operation of municipal water and wastewater facilities.

Description of Service:

Department offers between 15 and 20 courses annually for operators of water and wastewater systems to assist them in the operation of their facilities and to allow them to upgrade their qualifications.

Courses take a variety of formats including seminars, hands-on workshops, homestudy courses, and correspondence courses. These courses are provided in a variety of centres throughout the province during the fall and winter. The types of courses and the material delivered varies from year to year depending on recommendations from operator groups, municipalities, and inspectors.

10) Municipal Water and Sewage Systems

Service Beneficiary: Municipal officials

Objective/Purpose: To ensure proper operation and maintenance of municipal water and sewage facilities.

Description of Service:

The Branch provides engineers and technicians to assist operators and councils with the operation and maintenance of their water and wastewater facilities. Department personnel help operators with on-site problems they may be encountering with their operations. The department also provides an emergency response service whenever there is a mishap regarding municipal water and sewage facilities.

11) Research Coordination and Advisory Services

Service Beneficiary: Public, Industry, Municipalities

Objective/Purpose: To provide research advisory services to public, industry and municipal environmental research planning organizations and to coordinate activities from other research programs to minimize redundancies and maximize the value of research expenditures.

Description of Service:

Department representatives meet on an 'as-required' and in some cases, a regular basis with public, industry and municipal environmental research planning committees. Technical advice and coordination is offered at the planning and research evaluation stages in the major subject areas of air, land, water and human concerns. Examples of cooperative research projects range from multi-million dollar projects, such as the Acid Deposition Research Program (ADRP) to smaller site-specific technical problems.

12) Flood Risk Mapping

Service Beneficiary: Public, Municipalities

Objective/Purpose: To provide maps/reports identifying the location of urban floodplain areas that are subject to a 1% or greater risk of being flooded by a river or stream.

Description of Service:

1. All urban areas bordering rivers and streams come under the program.
2. Major centres have been mapped and revisions are made as necessary.
3. New subdivisions are generally mapped upon request by a Planning Commission.

13) River Forecast Centre

Service Beneficiary: Streamflow forecasting service is available to all people of Alberta and is particularly

useful to irrigation water users, hydro-electric companies, flood control agencies, recreationists.

Objective/Purpose: To provide river forecasts, real-time river information and real-time technical advice for Water Resources Management and general river uses for the province of Alberta.

Description of Service:

River Forecasting includes:

- flood forecasting and flood warning;
- water supply volume forecasting, and
- generally, the prediction of the rate of flow and the water level of a river at a location, or the water level of a lake or reservoir, for a number of days into the future.

Providing real-time* river information includes:

- providing information on current streamflow conditions, and
- in particular, monitoring flow conditions at the borders of Alberta to ensure that the province meets its commitments to other jurisdictions as specified in the Master Agreement on Apportionment, and that other jurisdictions meet their commitments to Alberta.

Real-time water management technical advice includes:

- forecasting flood inflow to provincial water storage reservoirs;
- advising reservoir operators concerning real-time flood regulation operations;

*Note: "real-time" means "current" or "up-to-the-minute".

- forecasting streamflow at diversion points along a river to anticipate the short-term future day-to-day water supply situation;
- advising reservoir operators concerning real-time water supply operations; and
- advising the Water Resources Management services of Alberta Environment concerning real-time water regulation strategies during periods of water supply shortage.

14) River Ice Problem Mitigation

Service Beneficiary: Service is available on request by local authorities.

Objective/Purpose: To assist local authorities in preventing or removing ice jams which pose a danger to river bank communities.

Description of Service:

Preventive measures and/or special observations are taken for communities with recurrent problems.

C. FUNDING AVAILABLE FOR MUNICIPALITIES

- 1) Biting Fly Control Financial Assistance Program
- 2) Alberta Water Management and Erosion Control Program
- 3) Resource Recovery Grant
- 4) Reclamation Program for Derelict Land
- 5) Alberta Waste Management Assistance Program
- 6) Pesticide Container Collection Program

1) Biting Fly Control Financial Assistance Program

Service Beneficiary: This program is available to all municipal districts, who as a collective group, feel that their municipality has a serious biting fly infestation.

Objective/Purpose: To assist municipal governments in the initiation and/or improvement of Biting Fly Control Program.

Description of Service:

To be eligible for such grants, municipalities must submit an application for assistance to the Department of Environment prior to the commencement of their control programs, outlining proposed cost and methods of control. These proposals must be acceptable to the Department. Should conditions warrant that a control program receive any additional funds, such funds may be granted pending approval by the Minister of the Environment. Approved control programs will be subject to inspection. An annual report, including complete financial records, must be submitted by each municipality to the Department at the end of the control program in order to receive financial assistance. A licensed Class "L" applicator must supervise each abatement program.

This program was implemented in 1974 and is an ongoing program of the Provincial Government. There is no known termination date.

The Provincial Budget is as follows:

<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>	<u>1987/88</u>
\$578,000	\$585,000	\$606,000	\$630,000	\$630,000	\$630,000

Grants are calculated according to a cost-sharing formula.

2) Alberta Water Management and Erosion Control Program

Service Beneficiary: This program is available to all Alberta local authorities.

Objective/Purpose: To provide assistance to local authorities for the enhancement and regional development of the Province's water resources and to provide corrective measures where water, in its natural state, creates conditions adverse to the public interest.

Description of Service:

The project or projects must be initiated by a local authority, and the need for such a project must be established. The project must be in the public interest and provide benefits to the general public or protect public investment. Project planning and consideration of all aspects of water resource and environmental management must precede implementation. The local authority initiating the project must accept the responsibility for land acquisition, and operating and maintenance costs.

Agreements are entered into (under the Water Resources Act) between the Minister of Environment and the local authorities. Projects are funded on the basis of the budgetary priority for water management established by the government.

Grants are provided on a 75:25% basis (Government funding up to 75% of the project cost). The program also provides grants on an 86:14% basis for agricultural flood control, drainage and erosion control projects.

An additional component of this program is available for projects in the Northern Alberta Erosion Control Area. This area of Alberta has unique geographic characteristics which make it susceptible to erosion. In addition to the grants described above, engineering for these projects is funded 100% by the department. As well, projects in this area are eligible for maintenance assistance. For organized local authorities the maintenance assistance is given in the form of grants. In the case of improvement districts, the department utilizes its own forces to carry out the required maintenance and recovers a percentage of the cost from the improvement district.

This is an ongoing program of the provincial government that was implemented in October, 1972.

The Provincial Budget is as follows:

<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>	<u>1987/88</u>
\$6,780,000	\$6,780,000	\$5,941,000	\$5,941,000	\$6,361,000	\$5,510,000

3) Resource Recovery Grant

Service Beneficiary: All municipalities in Alberta are eligible.

Objective/Purpose: To encourage communities to become involved in the collection of recyclable material, and encourage the reduction of wastes that must be disposed.

Description of Service:

This is a Capital Grants Program. The Department will fund non-motorized equipment necessary for the separation and storage of recyclable marketable materials.

There is a \$106,500 available for recycling grants in 1986/87

The program is funded 100% by the Province.

This is an ongoing program initially implemented in 1976. Applications are accepted throughout the year.

4) Reclamation Program for Derelict Land

Service Beneficiary: Municipalities

Objective/Purpose: To reclaim derelict land that has been left idle with the objective of making that land as productive as it was prior to disturbance. The land in question must be owned by a public body or must be purchased by a public body.

Description of Service:

The Reclamation Branch of Alberta Environment assumes all responsibilities for engineering, supervision, planning, hiring and paying contractors to complete reclamation projects.

Abandoned sites considered to be eligible include:

1. Coal mines or quarries.
2. Gravel pits.
3. Garbage dumps and sewage lagoons.
4. Refinery sites or other mineral processing plants.
5. Industrial sites.
6. Irrigation canals or man-made water reservoirs
7. Roadways, airports, railroads.

The intent of the reclamation funds is to improve sites that were disturbed prior to legislation and the rise of public concern over environmental problems. Recently abandoned sites under regulation will be carefully reviewed by Department staff prior to acceptance as reclamation projects.

Some commonly submitted proposals which are NOT include in the program are:

1. Natural or water filled low lying areas.
2. Agricultural operations.
3. Forestry operations.
4. Removal of car body stock piles.
5. Picking up of scattered debris.
6. Erosion control resulting from agricultural and forestry operation, and municipal or provincial projects including road building and bridge construction.

This is a program that has approval till 1988/89
Applications by Municipalities can be made at any time
during the year

5) Alberta Waste Management Assistance Program

Service Beneficiary: Available to all rural and urban municipalities who form a regional authority consisting of two or more urban municipalities plus one or more rural municipalities.

Objective/Purpose: To promote environmentally sound waste management throughout the Province.

Description of Service:

The Province will provide land and capital funding for regional sanitary landfill sites or other facilities for waste management.

The Province will pay 100% of the fair market value for land, and lease this land to the municipality for use as a sanitary landfill. Also, the Province will pay up to 100% of the initial capital costs of the systems. Annual operating costs are the responsibility of the regional authority.

This is an ongoing program of the Provincial Government that was implemented in December 1975.

The Provincial Budget is as follows:

<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>
\$2,950,000	\$2,950,000	\$2,200,000	\$2,200,000	\$2,500,000

6) Pesticide Container Collection Program

Service Beneficiary: This program is available to all agricultural based local authorities that feel permanent pesticide container sites would benefit their farming populace.

Objective/Purpose: To provide technical and financial assistance in the selection and construction of permanent pesticide container collection sites.

Description of Service:

To be eligible for such grants, municipalities must select a site, secure Health Board approval, and submit an application to the Department of Environment. Enclosed with the signed application there must be a statement of expenses for the work to be done. These potential sites must be acceptable to the Department. If approved, notification allows the future recipient to begin construction immediately. Upon completion, the municipality must maintain the site and contact the Department when sufficient containers have been collected to warrant pickup.

Approved pesticide container collection sites will be funded in the following manner:

- a) Should sufficient funds be available, all applications will be accepted.
- b) If this is not so, preference will be given to municipalities making their first application under the program.
- c) Number of funded sites and a ceiling on funding for each municipality have not been established, however, need must be shown.

This program was implemented in 1980 and is an ongoing program of the Provincial Government.

The Provincial Budget is as follows:

<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>
\$200,000	\$100,000	\$50,000	\$45,000	\$35,000

F. SURFACE WATER DEVELOPMENT AND CONTROL

- 1) Northern Alberta Erosion Control Area
- 2) Emergency Water Pumping Program

1) Northern Alberta Erosion Control Area

Service Beneficiary: This service is available to local authorities in Northern Alberta. The program was established in recognition that the area differs from the rest of Alberta in its characteristics and conditions, related to erosion susceptibility.

Objective/Purpose: To provide assistance to local authorities in the designated area for rehabilitation of water resources projects previously constructed under a cost-sharing arrangement with the province.

Description of Service:

Rehabilitation of projects are carried out and funded 100% by the department. (Note: Rehabilitated projects are subsequently eligible for maintenance grants on a 75:25% basis or on an 86:14% basis for agricultural drainage and flood control projects. These grants are funded under the Alberta Water Management and Erosion Control Program).

2) Emergency Water Pumping Program

Service Beneficiary: Local Authorities & Public

Objective/Purpose: To provide assistance to local authorities and communities by providing pumps and pipes to relieve emergency situations related to water shortages.

Description of Service:

When a water shortage situation is anticipated, the local authority must initiate the request for assistance identifying the nature of the emergency. Upon inspection and confirmation of the emergency nature of the situation, the department will react by supplying the necessary equipment to alleviate the problem.

An agreement is entered into between Alberta Environment and the local authority once department involvement is determined, indicating the approximate cost and stipulating that the local authority is responsible for obtaining land easements and for supplying the required manpower for pipe installation.

Upon completion of the emergency pumping activity, the local authority is invoiced at cost to the department.

This is an ongoing program of the government.
